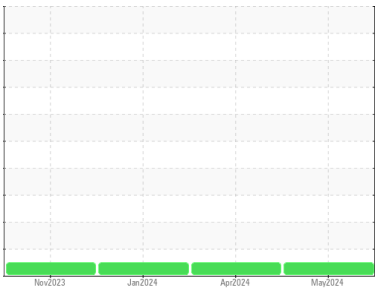
OIL DIAGNOSTICS

# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Area

## (P1021273) Dixon Transport-Tractor

Machine Id

## [Dixon Transport-Tractor] 325A325534

Component

**Diesel Engine**

Fluid

**PETRO CANADA DURON SHP 10W30 (11 GAL)**

## DIAGNOSIS

**Recommendation**
Resample at the next service interval to monitor.

**Wear**
All component wear rates are normal.

**Contamination**
There is no indication of any contamination in the oil.

**Fluid Condition**
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **PCA0121227** | PCA0121211 | PCA0114341 |
| Sample Date | | Client Info | | **20 May 2024** | 25 Apr 2024 | 19 Jan 2024 |
| Machine Age | mls | Client Info | | **415679** | 414252 | 407266 |
| Oil Age | mls | Client Info | | **26016** | 24589 | 17603 |
| Oil Changed | | Client Info | | **Changed** | Not Changd | Not Changd |
| Sample Status | | | | **NORMAL** | NORMAL | NORMAL |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Fuel | | WC Method | >5 | **<1.0** | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | **NEG** | NEG | NEG |
| Glycol | | WC Method | | **NEG** | NEG | NEG |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >80 | **49** | 57 | 16 |
| Chromium | ppm | ASTM D5185m | >5 | **2** | 4 | 2 |
| Nickel | ppm | ASTM D5185m | >2 | **0** | 2 | 1 |
| Titanium | ppm | ASTM D5185m | | **<1** | <1 | <1 |
| Silver | ppm | ASTM D5185m | >3 | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >30 | **15** | 18 | 7 |
| Lead | ppm | ASTM D5185m | >30 | **0** | <1 | 0 |
| Copper | ppm | ASTM D5185m | >150 | **11** | 14 | 8 |
| Tin | ppm | ASTM D5185m | >5 | **1** | 1 | 1 |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | <1 |
| Cadmium | ppm | ASTM D5185m | | **0** | <1 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | 2 | **6** | 5 | 6 |
| Barium | ppm | ASTM D5185m | 0 | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 50 | **59** | 72 | 62 |
| Manganese | ppm | ASTM D5185m | 0 | **1** | 1 | <1 |
| Magnesium | ppm | ASTM D5185m | 950 | **972** | 1121 | 1017 |
| Calcium | ppm | ASTM D5185m | 1050 | **1083** | 1250 | 1106 |
| Phosphorus | ppm | ASTM D5185m | 995 | **1060** | 1154 | 1045 |
| Zinc | ppm | ASTM D5185m | 1180 | **1251** | 1426 | 1262 |
| Sulfur | ppm | ASTM D5185m | 2600 | **3091** | 3401 | 2906 |

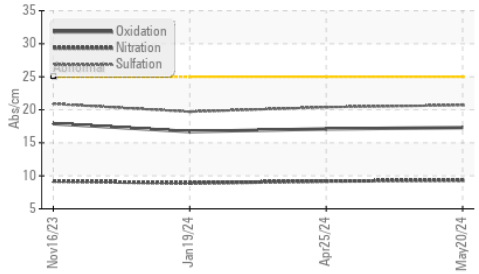
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >20 | **8** | 10 | 5 |
| Sodium | ppm | ASTM D5185m | | **3** | 3 | 2 |
| Potassium | ppm | ASTM D5185m | >20 | **2** | 5 | <1 |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Soot % | % | *ASTM D7844 | >3 | **0.5** | 0.5 | 0.4 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | **9.3** | 9.2 | 8.9 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | **20.7** | 20.4 | 19.7 |

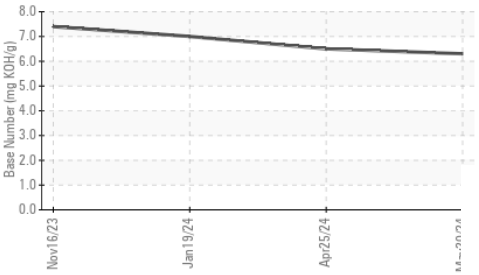
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | **17.3** | 17.1 | 16.7 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | **6.3** | 6.5 | 7.0 |

# OIL ANALYSIS REPORT

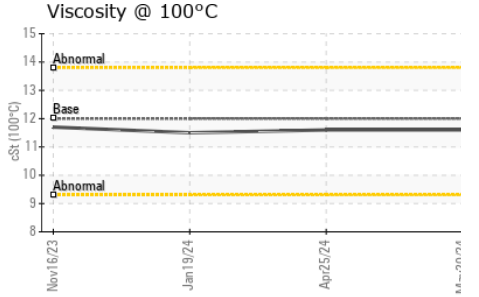
FT-IR (Direct Trend)




Base Number




Viscosity @ 100°C

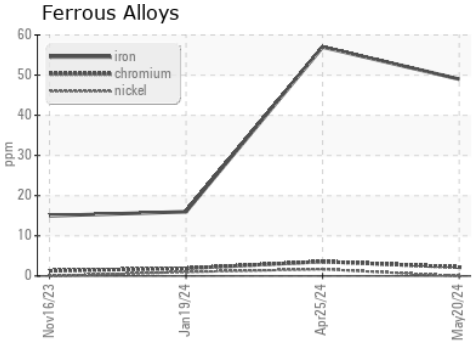



| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Silt | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Debris | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Appearance | scalar | *Visual | NORML | **NORML** | NORML | NORML |
| Odor | scalar | *Visual | NORML | **NORML** | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.2 | **NEG** | NEG | NEG |
| Free Water | scalar | *Visual | | **NEG** | NEG | NEG |

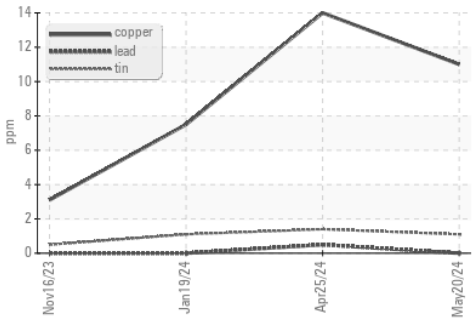
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 100°C | cSt | ASTM D445 | 12.00 | **11.6** | 11.6 | 11.5 |

## GRAPHS

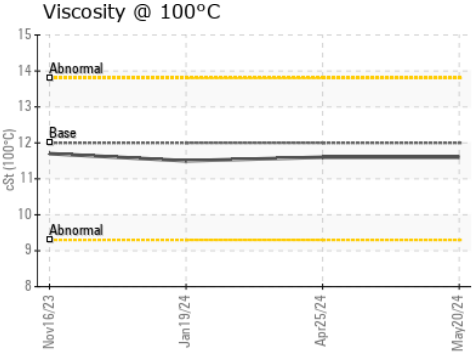
Ferrous Alloys



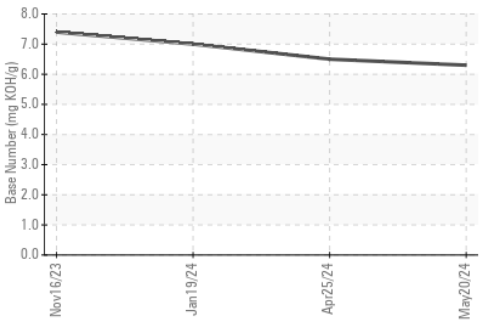

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : PCA0121227
**Lab Number** : 06196228
**Unique Number** : 11058351
**Test Package** : FLEET

**Received** : 31 May 2024
**Tested** : 03 Jun 2024
**Diagnosed** : 03 Jun 2024 - Wes Davis

**Transervice - Shop 3250 - Dixon Transport**
1124 E. River Road
Dixon, IL
US 61021
Contact: Mike Shoemaker
Shop3250@transervice.com
T:
F:

*To discuss this sample report, contact Customer Service at 1-800-237-1369.*
** - Denotes test methods that are outside of the ISO 17025 scope of accreditation.*
*Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)*

Report Id: TSV3250 [WUSCAR] 06196228 (Generated: 06/03/2024 07:30:44) Rev: 1

Submitted By: Mike Shoemaker